

## MEMORANDUM

TO: Mr. Nathaniel E. Robinson, Chairman  
National Sea Grant Review Panel

FROM: Dr. Geraldine Knatz, Ph.D, Co-Chair  
National Ports and Harbors Extension Program Review Panel

Dr. Frank Kudrna, Ph.D, Co-Chair  
National Ports and Harbors Extension Program Review Panel

DATE: January 20, 2006

SUBJECT: National Ports and Harbors Extension Program Report

The National Ports and Harbors Extension Review Panel (P&H Review Panel) is transmitting to you its report on the National Sea Grant College Program's (NSGCP) National Ports and Harbors Extension Program (P&H Extension Program). The review of the program was initiated on August 1, 2005 by your predecessor, Dr. Jerry Schubel. The attached report contains assessments of the program as well as recommendations for its improvement (summarized below).

As you know, ports and harbors are an integral part of the U.S. economy. Through the P&H Extension Program, the NSGCP has positioned itself to support and enhance the services that the ports industry provides to the U.S. economy. Furthermore, it has positioned itself in support of the Department of Commerce's historic mission "to foster, promote, and develop the foreign and domestic commerce" of the U.S., as well as NOAA's mission "to...conserve and manage coastal and marine resources to meet our nation's economic, social and environmental needs". The program can be strengthened, focused, and better aligned with these missions by:

- Re-establishing the National Sea Grant Ports and Harbors Specialist position in Washington, D.C.;
- Re-titling the existing Specialists to Regional Ports and Harbors Specialists;
- Formally partnering with a marine transportation system industry organization, such as the American Association of Port Authorities (AAPA), to host the National Sea Grant Ports and Harbors Specialist;
- Establishing an on-going advisory body to provide oversight and direction to the P&H Extension Program;
- The National Sea Grant Ports and Harbors Specialist should be specifically tasked to:
  - a. Develop a strategic plan for the Ports and Harbors Initiative;
  - b. Develop a national research agenda for ports and harbors issues;

- c. Establish a network with the Regional Ports and Harbors Specialists and others within the Sea Grant community working on ports and harbors issues;
- d. Execute a communication plan to share information about the Ports and Harbors Initiative;
- e. Coordinate implementation of the ports and harbors strategic plan, research agenda and communication plan with the following:
  - i. NOAA Program Offices, Coastal Services Center, Law Center and NSGCP
  - ii. National Ocean Council, Interagency Committee on the Marine Transportation System, and the Marine Transportation System National Advisory Committee;
  - iii. Industry stakeholders, such as the American Association of Port Authorities
  - iv. Research organizations, such as the Marine Board and the American Society of Civil Engineers.
- f. Preparing and distributing an annual report on services provided to the port sector. This report should include services provided by all NOAA programs, which would require cross-coordination between the NSGCP, other OAR and NOS programs, as well as NOAA Fisheries.

Cc: Mary Baker  
Tom Chase  
James Murray  
Jacques Oliver  
Melissa Pearson

National Ports and Harbors Extension Program Report  
January 20, 2006

<b>Table of Contents</b>	<b>Page</b>
<u>Section 1: Introduction</u>	4
<u>Section 2: Panel Review Process</u>	
a. Charge to National Sea Grant Review Panel	5
b. Methodology	6
<u>Section 3: Findings</u>	
a. Evaluation	7
b. Recommendations	11
<u>Appendix A: P&amp;H Extension Program Review Participants</u>	
a. Specialists	13
b. Ports and Harbors Review Panel	14
<u>Appendix B: Specialist Dr. Jim Kruse Research Portfolio</u>	16
<u>Appendix C: Specialist Dr. Jim Fawcett Research Portfolio</u>	21
<u>Appendix D: Specialist Mr. Justin Farrell Research Portfolio</u>	26
<u>Appendix E: Specialist Mr. David Knight Research Portfolio</u>	31
<u>Appendix F: Specialist Mr. David Chapman Research Portfolio</u>	36

## Section 1: Introduction

NOAA, as an agency within the U.S. Department of Commerce, has responsibilities for ocean and coastal stewardship and for sustainable economic development. Ports and harbors are of enormous economic significance to this country, and marine commercial and recreational transportation involves significant environmental issues as well. U.S. ports must keep pace with growth in waterborne trade and changes in ship design and technology. They must accommodate other waterfront user interests and deal with increasingly complex transportation links. They also must address critical environmental issues such as dredging and dredged material placement and the transport of non-indigenous aquatic species. Recreational vessels are a growing element of ports management.

NOAA's National Sea Grant College Program (NSGCP) plays a leading role in national marine and coastal research and in the development of marine resources for economic benefits. This is accomplished through an extensive network of state Sea Grant programs which promote research, education, and outreach. Individual Sea Grant programs have invested in ports and harbors issues in the past and Mr. Tom Dowd of Washington Sea Grant played a major role in this area. There has not been any national leadership within the NSGCP in this critically important area.

In 2001, the NSGCP initiated a request for proposals (RFP) for a National Ports and Harbors Extension Program (P&H Extension Program). This program called for establishing a NSGCP Ports and Harbors Specialist, hereafter called Specialist, who would lead Sea Grant's overall effort in ports and harbors issues, coordinate with individuals within the Sea Grant network on specific ports and harbors issues, and promote the growth and development of Sea Grant leadership in ports and harbors issues. It was envisioned that the Specialist would be located at a Sea Grant institution with an active academic unit dealing with ports and harbors issues. The Specialist was expected to be affiliated with that unit and be involved on both an extension and academic level with national and regional ports problems. The Specialist's duties and responsibilities were to include a minimum of 50% time devoted to national and regional outreach on ports issues. The primary responsibilities, according to the original RFP, were:

- 1) Serving as a focal coordinating point for expanding NSGCP activities on national ports and harbors and related marine transportation issues;
- 2) Helping develop a network of Sea Grant researchers and extension staff working on ports and harbors issues;
- 3) Conducting research and analyses on ports and harbors issues;
- 4) Providing outreach, extension, and other pertinent services to the Sea Grant network, NOAA and other Federal agencies, and to the ports and harbors industry;
- 5) Representing or organizing representation by the Sea Grant network at national and regional meetings, briefings, and hearings;

- 6) Collecting and disseminating information on ports and harbors through periodic workshops and conferences; and
- 7) Maintaining contacts with trade organizations, interacting with port managers, and developing contacts with leaders in the U.S. ports community.

These activities were intended to help the NSGCP develop a leadership role in addressing urgent national and regional issues confronting ports and harbors and in engaging our research universities in ports-related activities. Potential issues ranged from economic, planning, and management topics, to environmental issues, to developing technology needs.

After a national competition, Texas Sea Grant, located at Texas A&M University, was successful in its bid to assume the functions of the P&H Extension Program. Mr. John Basilotto was designated the Specialist within Texas Sea Grant. Soon after the award in 2002, Mr. Basilotto departed Texas Sea Grant and was replaced by the current Specialist, Dr. Jim Kruse. Since fiscal year (FY) 2002 and through FY 2006, Texas Sea Grant has been funded at a rate of \$100,000 per year in NSGCP funds for a total of \$500,000 in Federal funds. Those funds have been matched over the same time frame at a rate of 50% of Federal funds per year for a total of \$250,000 in leveraged funds. In total, the funding for the P&H Extension Program has been \$750,000 through FY 2006.

Subsequent to the NSGCP's award to Texas Sea Grant, three other Ports and Harbors Specialists were funded. These additional Specialists are: Dr. Jim Fawcett (University of Southern California Sea Grant), Mr. Justin Farrell (Louisiana Sea Grant), and Mr. David Knight (Great Lakes Commission). Mr. David Chapman (Delaware Sea Grant) has also been participating in research related to ports and harbors and was asked to be part of this review (Appendix A). The additional Specialists have been working on a variety of regional ports and harbors-related issues and are funded by a variety of sources (Appendices B-E), including by the NSGCP and NOAA's National Ocean Service Coastal Services Center (NOS CSC). At present, these five Specialists represent a loose affiliation of the NSGCP's efforts in the P&H Extension Program.

## Section 2: Panel Review Process

### a. Charge Letter

On August 1, 2005, Dr. Ronald Baird, Director, NSGCP, requested Dr. Jerry Schubel, then Chair of the NSGRP, to convene a review panel (P&H Review Panel) to review and assess the P&H Extension Program. In his charge letter, Dr. Baird suggested that the P&H Review Panel address specific questions in its review. They were:

- “1) Although Sea Grant has had programs related to ports for many years, has there been value-added with the recent national focus?
- 2) What is the optimum structure and staffing level for the ports and harbors extension program?

- 3) Given limited resources, what are the priority focus areas for ports and harbors extension programming?
- 4) What are the long-term goals and performance measures for the national ports and harbors extension program?
- 5) Should the ports and harbors extension program expand its international reach? If so, how should an enhanced international program be structured to benefit U.S. ports interests?
- 6) Should there be a national leader, and what would be the job responsibilities?
- 7) How can coordination with other parts of NOAA be improved?
- 8) Strategic advice regarding funding and a build-out plan.”

#### b. Methodology

The NSGRP appointed two of its members, Dr. Geraldine Knatz and Dr. Frank Kudrna, as co-chairs of the P&H Review Panel. The co-chairs worked with Dr. Mary Baker and Mr. Tom Chase as the full P&H Review Panel. Two members of the NSGCP’s National Sea Grant Office (NSGO) staff were assigned to work with the P&H Review Panel (Appendix A).

On September 1, 2005 the co-chairs of the P&H Review Panel conducted the first conference call to discuss the following issues: the initial scope of the review and methodologies for evaluation, logistics, and a time frame of the review. A formal request by the P&H Review Panel for information was sent to each of the five Specialists. In addition, a survey was circulated to the members of the American Association of Port Authorities (AAPA) to garner their impression of the impact and utility of the P&H Extension Program in their community. Specialists were encouraged to contact other end users to submit information to the P&H Review Panel. The solicited information is on file with the NSGO.

On October 11, 2005 the entire P&H Review Panel convened a second conference call to discuss the information provided by the Specialists, end users, and the members of the AAPA. Based on this input, the following issues were identified: there should be an examination of whether the goals in the original RFP were met or not met, there is a need for national leadership in the P&H Extension Program, there is a need for more collaborative research within the P&H Extension Program, the value of the P&H Extension Program should be more visible within and outside of NOAA, there is a need for an on-going advisory body to provide oversight and direction to the P&H Extension Program, and there should be enhanced coordination with Dr. Margaret Davidson, Director, NOAA’s NOS CSC, regarding the CSC’s participation and support of the P&H Extension Program. Also during this teleconference, the P&H Review Panel planned a December meeting to discuss in greater detail the issues in the P&H Extension Program relating to national leadership, strategic planning, and advisory functions. Furthermore, the meeting was designed so that the P&H Review Panel could interact and discuss the aforementioned issues

with each Specialist, as well as engage other members of the Sea Grant community as to their impressions of and recommendations for the P&H Extension Program.

On December 14-15, 2005, the P&H Review Panel met in Washington, D.C. The agenda included meetings with Dr. Davidson, Dr. Jonathan Kramer, President, Sea Grant Association (SGA), members of the Sea Grant Extension Assembly, the five Specialists, and Dr. Baird. The P&H Review Panel asked for input on the strengths of the existing program and how the program could be made more effective. Following the meetings with the participants, a closed session of the P&H Review Panel was held to develop findings and organized them around the questions posed in the Dr. Baird's charge letter to the Dr. Schubel and the P&H Review Panel.

Throughout the P&H Review Panel's deliberations information was requested from the Specialists regarding their research portfolios. Specifically, each Specialist was asked to provide their research project titles, funding support and sources, collaborators, and applications and/or benefits of each of their research projects. In addition, brief synopses of each of those projects were requested. This information is included in Appendices B-E.

### Section 3: Findings

#### a. Evaluation

- 1) Although Sea Grant has had programs related to ports for many years, has there been value-added with the recent national focus?

The P&H Review Panel believes the NSGCP's P&H Extension Program and the companion NOS CSC's Ports and Harbors Programs have provided added value at a regional level. However, they have not fully realized their potential at the national level. The P&H Review Panel was pleased to see the leverage and extent of research identified in Appendices B-E, which provides a multiplier for NSGCP and NOS CSC's investments.

- 2) What is the optimum structure and staffing level for the ports and harbors extension program?

The optimum structure of a comprehensive and proactive P&H Extension Program would consist of one National Ports and Harbors Specialist position stationed in the Washington D.C. area and Regional Port and Harbors Specialists located around the country. Minimum regional coverage would consist of four Specialists, one located on the East, West, and Gulf coasts and a fourth in the Great Lakes area.

The National Ports and Harbors Specialist would serve as the overall program coordinator and be responsible for identifying resources and capabilities within the entire sea grant network that could be accessed to address a specific problem. The National Ports and Harbors Specialist should be housed in the offices of a marine transportation system industry association such as the American Association of Port Authorities (AAPA) under a contractual arrangement with NOAA's NSGCP. Initial contacts with

the AAPA are supportive of this concept pending resolution of the financial arrangements. By housing the National Ports and Harbors Specialist in the AAPA offices, the National Ports and Harbors Specialist would have the ability to stay on top of emerging port issues. This first hand knowledge will be vital in assisting the Regional Port Specialists with developing a national research agenda serving the ports and harbors sector. A National Ports and Harbors Specialist located in Washington, D.C. would also have the ability to interact with all branches within NOAA and provide outreach to the port community on behalf of all branches of NOAA. A timely and relevant research agenda supported by national ports and NOAA, working together, would enhance the success of funding such endeavors.

3) Given limited resources, what are the priority focus areas for ports and harbors extension programming?

Should funding for the program be limited, the priority position for funding should be the National Ports and Harbors Specialist located in Washington, D.C. Even without regional specialists, the National Ports and Harbors Specialist still has the resources of the Sea Grant network to draw upon. Thus, the National Ports and Harbors Specialist would still have the ability to serve as a focal point for port inquiries, develop the national research agenda on port issues, facilitate collaboration with NOAA, and work with AAPA to identify and coordinate funding for port research.

4) What are the long-term goals and performance measures for the national ports and harbors extension program?

The P&H Extension Program currently has no strategic planning effort and is not well-connected to or nested within NOAA's larger strategic plan. However, the P&H Extension Program goals do fit within NOAA's strategic goal of "Supporting the Nation's commerce with information for safe, efficient, and environmentally sound transportation". Aligning the P&H Extension Program strategic plan with this NOAA strategic goal would provide additional focus and support for the program within NOAA and within the port industry. For example, simplifying the goals to developing a network of researchers and experts; conducting port related research; and providing services to port industry representatives with the goal of supporting safe, efficient, and environmentally sound marine transportation would clarify the intent of the program.

Outcomes that NOAA is pursuing within its commerce and transportation strategic goal include environmentally sound development and use of the U.S. transportation system. The NOAA performance measure associated with this outcome is "increasing the percentage of port communities using NOAA environmental information, products and services for NOAA's Marine Transportation System (MTS) planning" (referring to the nation's top 150 commercial ports).

No formal performance measures have been established for the P&H Extension Program. However, ad hoc performance measures seem to include: numbers of meetings attended, numbers of research or outreach projects conducted, and general satisfaction of port



industry representatives during and after encounters, although limited responses were received. During the P&H Review Panel's discussions, a number of more focused performance measures were suggested.

The P&H Extension Program should develop more concrete and quantifiable performance measures that should focus on delivery of port planning services to the 150 top U.S. port communities. Specific assistance with environmental regulation compliance, dispute mediation, delivery of observation data to the port sector, and representation of ports interests within the development of the international ocean observing system are suggested. The P&H Extension Program could also participate in and link to environmental performance measure development being conducted by the AAPA. The concept of resilient infrastructure, communities, and ecosystems should be explored further. For example, how can the port sector define and improve their resiliency to natural disasters and climate change? Can we define and measure our progress toward developing resilient infrastructure, resilient economic strategies, and developing ports that maintain or improve ecosystem resiliency?

5) Should the ports and harbors extension program expand its international reach? If so, how should an enhanced international program be structured to benefit U.S. ports interests?

While opportunities exist for the NSGCP to have involvement in international ports and harbors activities, the P&H Review Panel does not believe that current resource levels support international activities at this time. Additionally, a strong national program should be a pre-requisite to expansion internationally.

6) Should there be a national leader, and what would be the job responsibilities?

When the NSGCP sought proposals in 2001 for a National Sea Grant Ports and Harbor Specialist, it identified its desire to assume a national leadership role on ports and harbor issues because –

*“Ports and harbors are of enormous economic significance to this country, and marine commercial and recreational transportation involves significant environmental issues as well. U.S. ports must keep pace with growth in waterborne trade and changes in ship design and technology. They must accommodate other waterfront user interests and deal with increasingly complex transportation links. They also must address environmental issues such as dredging and dredged material placement and the transport of non-indigenous aquatic species.”*

The P&H Review Panel believes the need for national leadership by the NSGCP is as important today as it was in 2001. The lack of national leadership on ports and harbors issues, generally, was recognized by the U.S. Commission on Ocean Policy. In response to this call for greater leadership, the Bush Administration elevated the stature of ports and harbors issues when it moved the Interagency Committee on the Marine Transportation System (MTS) and the MTS National Advisory Council from the

Department of Transportation to the newly created National Ocean Council. Similarly, the U.S. Environmental Protection Agency (EPA) recently addressed this need by appointing a port-sector liaison within the Office of the Administrator to work with the industry to improve its environmental performance. (For more information on the EPA Port Sector Initiative, see [www.epa.gov/sectors/ports](http://www.epa.gov/sectors/ports).)

The NSGCP is commended for funding a National Port and Harbors Specialist within the Texas Sea Grant Program. In addition, NOAA's Coastal Services Center has funded port and harbors specialists in Southern California, Louisiana and the Great Lakes region, which, together with the NSGCP specialist, has raised the profile of port and harbor issues, particularly within the regions served by the specialists. While efforts have been made to build a broader network within the NSGCP and with outside stakeholder groups (e.g., the AAPA), the panel does not believe that the level of national leadership originally envisioned has been realized. This view was shared by the Specialists surveyed for this report.

#### 7) How can coordination with other parts of NOAA be improved?

Currently, there appears to be little understanding and knowledge within NOAA of the P&H Extension Program. Furthermore, the Specialists have little exposure to other NOAA programs. The P&H Review Panel discussed several ideas for improving this situation.

Most importantly, visibility for this program should be improved. Accomplishments should be reported to NOAA management through the Office of Oceanic and Atmospheric Research (OAR). The Department of Commerce should also take interest in the accomplishments and activities of the program.

The P&H Extension Program would be more effective if it were more closely connected to the NOAA strategic planning effort and NOAA's Marine Transportation System (MTS) Program. By participating in the NOAA MTS Program, the P&H Extension Program would maintain its relevance and connection to the NOAA budget process. Through this venue, connections can also be made to other NOAA goal teams.

The program could focus on providing a few key NOAA services of great interest to many ports. Examples might include ballast water/invasive species research, pilot whale regulations, and observing system data delivery. The program should expand, update, and distribute a menu of NOAA port services, and remain connected to other relevant NOAA programs to be able to keep the menu current.

#### 8) Strategic advice regarding funding and a build-out plan.

The P&H Extension Program could be expanded by re-establishing a National Ports and Harbors Specialist position within the NSGCP office in formal partnership with a marine transportation system industry organization, such as the AAPA. The National Ports and

Harbors Specialist should become an expert on national ports and harbors issues, providing a resource to NOAA and the NSGCP and creating ad hoc partnerships with essential stakeholders, including industry leaders, state and local officials, and others to advance the NSGCP leadership on ports and harbors issues.

The National Ports and Harbors Specialist should develop a strategic plan for the initiative which addresses the 1) building of a network of Regional Ports and Harbors Specialists, 2) coordination and partnership with NOAA program offices and external organizations, 3) development and implementation of a ports and harbors research agenda, and 4) execution of a communication plan. Specific performance measures of P&H Extension Program Initiatives should also be identified, monitored and highlighted in a more comprehensive way.

#### b. Recommendations

The P&H Review Panel recommends that the NSGCP strengthen the National Sea Grant Ports and Harbors Initiative by undertaking the following actions:

- Re-establish the National Sea Grant Ports and Harbors Specialist position in Washington, D.C.;
- Re-title the existing Specialists to Regional Ports and Harbors Specialists;
- Formally partner with a marine transportation system industry organization, such as the American Association of Port Authorities (AAPA), to host the National Sea Grant Ports and Harbors Specialist;
- Establish an on-going advisory body to provide oversight and direction to the P&H Extension Program;
- The National Sea Grant Ports and Harbors Specialist should be specifically tasked to:
  - a. Develop a strategic plan for the Ports and Harbors Initiative;
  - b. Develop a national research agenda for ports and harbors issues;
  - c. Establish a network with the Regional Ports and Harbors Specialists and others within the Sea Grant community working on ports and harbors issues;
  - d. Execute a communication plan to share information about the Ports and Harbors Initiative;
  - e. Coordinate implementation of the ports and harbors strategic plan, research agenda and communication plan with the following:
    - i. NOAA Program Offices, Coastal Services Center, Law Center and NSGCP
    - ii. National Ocean Council, Interagency Committee on the Marine Transportation System, and the Marine Transportation System National Advisory Committee;
    - iii. Industry stakeholders, such as the American Association of Port Authorities

- iv. Research organizations, such as the Marine Board and the American Society of Civil Engineers;
- f. Prepare and distribute an annual report on services provided to the port sector. This report should include services provided by all NOAA programs, which would require cross-coordination between the NSGCP, other OAR and NOS programs, as well as NOAA Fisheries.

## Appendix A: P&H Extension Program Review Participants

### a. Specialists

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The P&H Review Panel requested additional information from the Specialists regarding their research portfolios. Specifically, each Specialist was asked to provide their research project titles, funding support and sources, collaborators, and applications and/or benefits of each of their research projects. In addition, brief synopses of each of those projects were requested and are listed below each table.

Appendix B: Specialist Dr. Jim Kruse Research Portfolio

Research Project (Title)	Funding Support (\$)	Funding Source(s)	Collaborating Partners and Agencies	Duration (m/d/yr – m/d/yr)	User Group(s) (current or intended)
A. User Assessment of Coastal Ocean Observation Systems in the Gulf of Mexico	\$15,000	Sea Grant		9/1/03 – 5/31/04	GCOOS organizing committee
B. Analysis of Start-Up Cross-Gulf Activities with Mexico since 1990	\$57,500	Southwest University Transportation Center (DOT)	Texas Transportation Institute	9/1/03 – 8/31/04	Ports, marine transportation providers, elected officials
C. Container on Barge Analysis	\$35,000	Trinity Industries	TTI	1/9/06 – 4/9/06	Trinity Marine marketing department
D. Container on Barge Feasibility Study	Free	N/A	Texas A&M-University at Galveston & TTI	2/6/04 – 12/15/04	Broad group of port and transportation interests, as well as Maritime Administration
E. The Effect of the New Security Paradigm on Port Infrastructure Development And Finances	\$45,000	Southwest University Transportation Center (DOT)	TTI	9/1/04 – 8/31/05	Ports, MARAD, and elected officials



Research Project (Title)	Funding Support (\$)	Funding Source(s)	Collaborating Partners and Agencies	Duration (m/d/yr – m/d/yr)	User Group(s) (current or intended)
F. Comparison of Environmental Impacts by Mode	\$32,000 for First Phase (2 <sup>nd</sup> Phase ??)	Maritime Administration	TTI	10/19/05 – 1/24/06	MARAD, transportation interests on Inland Waterway System, elected officials
G. Texas Ports Association Web Site	\$10,000	Texas Ports Association		7/1/05 – 11/18/05	Texas Ports and their customers, prospects, and elected officials
H. Analysis of U.S.-Mexico Border Trade Targets for Short Sea Shipping	\$25,000 for Phase 1 (Phase 2 = \$35,000)	Gulf Ports Association	TTI	10/21/05 – 1/21/06	Gulf Ports Association membership
I. The Value of Texas Seaports in an Environment of Increasing Global Trade	\$81,000 our share (total is \$311,000)	Texas Department of Transportation	University of Texas Center for Transportation Research and TTI	1/17/06 – 10/31/07	TxDOT and Texas port system
J. Texas Recreational Boating Accident and Statistical Report	\$18,000	Center for Transportation Safety (State of Texas)	TTI	3/1/05 – 8/31/05	Texas Parks & Wildlife Department and US Coast Guard

Research Project (Title)	Funding Support (\$)	Funding Source(s)	Collaborating Partners and Agencies	Duration (m/d/yr – m/d/yr)	User Group(s) (current or intended)
K. Handheld Intensified Night Vision Assessment and Validation	Up to \$10,000	Department of Homeland Security	TTI, Space and Naval Warfare Systems Center, and Center for Domestic Preparedness (Dept of Justice)	11/1/05 – 12/31/05	DHS, port security departments, and first responders
L. Impacts of Climate Change and Variability on Transportation Systems and Infrastructure: Gulf Coast Study	\$46,000 (our share)	US Department of Transportation and US Geological Survey	TTI, Cambridge Systematics, Houston-Galveston Area Council, Louisiana State University, University of New Orleans, Wilbur Smith Associates, and Texas A&M	12/6/05 – 6/30/06 (?)	Variety of US government agencies and university researchers
M. Peer Review of (1) Transportation Study On The Grain Market Segment And The Panama Canal, and (2) Transportation Study On The Dry Bulk Market Segment And The Panama Canal	\$25,000	Panama Canal Authority	TTI	4/16/03 – 7/3/03	Panama Canal Authority

## PROJECT DESCRIPTION

	Description	Outcomes/Applications
A	Survey & Interviews conducted to determine main user groups and the data they would like to see from GCOOS	Used by GCOOS director at Texas A&M to determine workshops needed
B	Identification and analysis of efforts to set up US-Mexico shipping services—description of strengths and weaknesses with policy implications	Journal of Commerce has asked me to share findings at conference in March 2006. TxDOT has been interested in expanding the research.
C	First phase involves identify inland ports that could be part of Container On Barge network and identifying most important logistical concerns	In progress
D	Survey of inland port authorities to determine current situation and possibility/interest in promoting Container On Barge	Used by MARAD's Inland Waterway Intermodal Cooperative Program to develop approach to setting up COB network
E	Detailed analysis of financial condition, infrastructure financing methods, port security grant program, and impact of new security expenses on Texas Ports	Just Completed. Both Port of Houston and Port of Galveston have been very interested, but have not shared how they will use it.
F	Detailed evaluation of differences between freight transportation modes in the areas of environment and safety	In progress
G	Developed new web site for Association	Web site now in use. Includes information they have been trying to get out to politicians and general public.
H	Study to determine what is crossing border in Texas that Gulf States could move by water	In progress
I	Essentially an expanded economic impact study for both deep draft and shallow draft ports in Texas	About to kick off
J	Analysis of boating accidents in Texas Waters	Texas Parks & Wildlife makes this available to public
K	Field testing of handheld night vision equipment in port environment (Charleston & Beaumont)	In progress
L	Analysis of how climate changes in the next 50 years could affect Gulf Coast Transportation System. Our portion is pipelines	In progress

M	Peer review of studies done in support of Panama Canal Expansion Program	Consultant revised original report to address our comments
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Associated Extension/Outreach Activities:

- Involvement with Summer Transportation Institute (FHWA) at two universities
- Provide testimony and data to legislators in several states
- Serve as resource to SG network (have assisted various states)
- Organize and conduct biennial Texas Ports & Waterways Conference
- Have provided information to and been interviewed by several newspapers in major metropolitan areas around the country
- Have supplied information to Governor's Office
- Have been asked to share research findings at Journal of Commerce's Short Sea Shipping Conference in March 2006

### Appendix C: Specialist Dr. Jim Fawcett Research Portfolio

Research Project (Title)	Funding Support (\$)	Funding Source(s)	Collaborating Partners and Agencies	Duration (m/d/yr – m/d/yr)	User Group(s) (current or intended)
A. Maritime Cargo Security Conference	\$40,000	NOAA National Ocean Service, USC School of Int'l. Relations, USC School of Policy, Planning and Development, Port of Long Beach	US Coast Guard, FBI, Port of Los Angeles, Port of Long Beach, Southern California Marine Exchange, Int'l Longshore and Warehouse Union, USC College of Letters, Arts & Sciences, NOAA Corps, Los Angeles County Sheriff's Department (Office of Emergency Services), Los Angeles County Supervisor Don Knabe, Office of Congressman Dana Rohrabacher	03/04/2005	Both funding source list and Collaborating Partners list and various consultants, local governments and State of California Office of Emergency Services (OES)
B. Coastal Storms Program	\$10,100	National Ocean Service	NOAA environmental data collection agencies	02/17/2005	Agriculture, flood control agencies, Southern California Coastal Ocean Observing Program, California OES, researchers, Los Angeles County Lifeguards,
C. Devolution, Port Privatization and Port Management	None	Prof. Mary Brooks, Dalhousie Univ., Halifax, N.S., Canada	Dalhousie University	09/2004 and continuing	Seaport researchers, legislators, other port management officials
D. Marine Transportation Extension including the research entitled, "Short-Sea Shipping: Reducing Vessel Traffic Impacts to the San Francisco Bay and Delta"	\$266,000	CalFed Bay Delta Project	NOAA Corps, NOAA Office of the Coast Survey, various seaports in the San Francisco Bay	08/2002 through 03/2005	Environmental managers, seaport managers, state legislators and legislative staffs, federal environmental managers, seaport

Research Project (Title)	Funding Support (\$)	Funding Source(s)	Collaborating Partners and Agencies	Duration (m/d/yr – m/d/yr)	User Group(s) (current or intended)
					managers in the San Francisco Bay and adjacent seaports in the Delta
E. Graduate course in the USC School of Policy, Planning and Development, “Coastal Policy and Planning,” PPD 694	\$16,000	USC School of Policy, Planning and Development	Port of Los Angeles	Spring Semester 2003, Spring Semester 2004, Spring Semester 2006	Current and potential future environmental and marine transportation managers
F. Integrating Maritime Transportation Movements with the Urban Transportation System (UTS): A Corridor-Centered Approach	\$66,283	USC Sea Grant	USC METRANS Program; Los Angeles County Metropolitan Transportation Authority, CALTRANS	03-2004 through 02-2006	LA County MTA; CALTRANS; transportation researchers; transportation planning students
G. Paul Hall Marine Transportation Lectureship	\$280,000 (endowment corpus)	The Transportation Institute	USC Sea Grant Program	2005 and ongoing	Marine transportation professionals

## PROJECT DESCRIPTION

- A. Maritime Cargo Security Conference: (Outreach and Research) Conceived and organized by James Fawcett. One-day conference involved approximately 200 participants from the marine transportation industry, government officials at all levels, academics and elected officials to discuss how the region can best respond to an incident (accidental or deliberate) arising from cargo moving through the region in intermodal cargo containers. The Los Angeles County Supervisor responsible for the harbor areas (and who has been appointed by the president as a member of the advisory committee of the Department of Homeland Security) was the keynote speaker. Rep. Dana Rohrabacher whose district includes the ports was invited as the luncheon speaker. His district director delivered his remarks. The three discussion panels included representatives of academia, maritime labor, the US Coast Guard, the maritime industry and the Los Angeles Economic Development Corporation. **Outcome:** Post-conference evaluations demonstrated that the conference was useful to the attendees because the meeting provided a means of linking various parties who might not otherwise have known with whom they could coordinate on matters of transportation safety and security. This was especially true for researchers in the USC Center for Risk and Economic Analysis of Terrorism Events (CREATE) who developed personal links with agencies who can further their research.
- B. Coastal Storms Program: (Research and Outreach) James Fawcett and Ruth Dudas assisted Rebecca Smyth, California Regional Coordinator for the National Ocean Service to bring together for a one-day workshop approximately 60 users of NOAA storms data in the Southern California area. The attendees were from a wide range of NOAA coastal storms data users who met with representatives of the NOAA agencies that produce storm data. The objective of the workshop was twofold: increase the awareness of data users as to the range of storm data but also to inform NOAA managers of the ways in which their data is currently used and can better be used in the future. While NOAA has the prime responsibility for improving data delivery, many attendees noted that they did not realize the wealth of data types produced by NOAA. Attendees included flood control agencies, the Southern California Marine Exchange that monitors all shipping traffic between San Diego and Pt. Conception, the Los Angeles County Department of Beaches and Harbors, the Los Angeles County Fire Department (Ocean Lifeguard Division), the Regional Water Quality Control Board, the Los Angeles County Department of Public Works and many other jurisdictions. **Outcomes:** The workshop provided information for NOAA's data managers that they will use to modify the types of data that they collect as well as modifying its methods of delivery. This is research feedback that is otherwise difficult to obtain. The workshop also provided education for NOAA data users on the wide array of data products available to predict and document the impact of storms.

- C. Devolution, Port Privatization and Port Management: (Research) James Fawcett wrote a chapter in the new book, Devolution, Port Privatization and Port Management, edited by Professor Mary Brooks, William A. Black Chair of Commerce, School of Business Administration, Dalhousie University. The book discusses port privatization in Europe, Asia, Latin America, the US and Canada. Fawcett's chapter discusses privatization in the US, gives historical background and explains why privatization has not made as large an impact on US seaports as elsewhere in the world. The book explicates the process of privatization and explores differences in that process in various corners of the world. **Outcome:** Elsevier will publish the book in the late spring 2006. It is designed for students of port management, business, economic development, as well as practitioners and public officials who seek to make decisions about whether to privatize seaports, how it has been done elsewhere and how it might be done in their home country. Funding: no funds were provided for the work but the importance of the book dictated participation in the project.
- D. Marine Transportation Extension including the research entitled, "Short-Sea Shipping: Reducing Vessel Traffic Impacts to the San Francisco Bay and Delta": (Research and Outreach) The CalFed Bay Delta Project is a multi-agency joint state-federal endeavor to investigate and prescribe best practices for managing the Sacramento-San Joaquin River delta that feeds fresh water into San Francisco Bay as well as providing irrigation water to the San Joaquin Valley. James Fawcett's research concentrated on the impact of merchant shipping on the delta as well as potential impacts of that shipping on expanded facilities at both Bay and delta seaports from Stockton on the east to San Francisco and Redwood City on the west. Among the products of the two-and-a-half years of work was a presentation on short-sea shipping at the 2004 CalFed Bay Delta Science Conference in Sacramento. The project provided a substantial amount of match funding for the years 2002-2005. **Outcome:** The research identified the likely impacts of expanded shipping on the Bay and Delta, especially the Delta and educated resource managers as to the likely impacts of increased ship movements on both Bay and delta seaports the lasting effects of which will be borne out in policy decisions related to further development of the seaports in San Francisco Bay, Carquinez Straits, Suisun Bay and eastward to Stockton.
- E. Graduate course in the USC School of Policy, Planning and Development, "Coastal Policy and Planning," PPD 694: (Research/Curriculum Development) Upon first rejoining USC's Sea Grant Program in 2002, Dr. Fawcett was approached by the USC School of Policy, Planning and Development to teach a graduate level course on coastal management. He agreed to do and has devoted a significant portion of the course on use allocation and conflict to seaports and the attendant environmental policy issues related to locating these essential coastal-dependent facilities along the nation's shoreline. He taught the course for two years as an experimental "Special Topics" course but in 2004 the course was approved as a permanent graduate course in the Public Policy Graduate curriculum. **Outcome:** The course takes advantage of seaports as a model system through which to discuss resource allocation dilemmas along the nation's coastline and teaches the skills of resolving those dilemmas to graduate students in public policy, urban planning, architecture, geography and environmental



studies. The class is taught after normal working hours and because Dr. Fawcett is a full-time university employee, his additional salary from teaching is routed to a special account in Sea Grant where it is used for expenses related to the marine transportation program. However, over the past three years the School of Policy, Planning and Development has derived tuition of \$120,000 from this class.

- F. Integrating Maritime Transportation Movements with the Urban Transportation System (UTS): A Corridor-Centered Approach: (Research) This Sea Grant funded project was the direct result of conversations between Dr. Fawcett and Prof. Le Dam Hanh of the USC Viterbi School of Engineering. Dr. Le has extensive experience as an industrial and systems engineer as well as considerable experience with the marine transportation industry. Through their discussions, she conceptualized this project to explore the inefficiencies in the terrestrial transportation system in the Los Angeles region. The objective has been to examine transportation corridors, understand how they are used, especially for marine freight, and to then develop models of how those corridors could better be utilized to improve freight flow through the region. She has worked with Dr. Fawcett and the METTRANS project at USC as well as with the California Department of Transportation (CalTrans), the Metropolitan Transportation Authority of Los Angeles County (MTA), the local metropolitan planning organization known as SCAG (Southern California Association of Governments) and other agencies. **Outcome:** she and Dr. Fawcett will take the results of the project in the spring of 2006 and make them available to these authorities as well as to the academic audience to leverage the benefits from this Sea Grant sponsored work.
- G. Paul Hall Marine Transportation Lectureship: (Research and Outreach) The Paul Hall Marine Transportation Lectureship was established at USC in the early 1980s with funds given by his friends and colleagues in memory of Paul Hall, the legendary maritime labor leader. Since that time the lectureship has sponsored meetings both in Los Angeles and Washington, DC on marine transportation themes. In 2005 the university transferred responsibility for the lectureship and the endowment to Sea Grant recognizing Dr. Fawcett's involvement in this field. **Anticipated outcomes:** Our expectation is to revitalize the lectures and through them, to develop research themes on this campus as well as a greater awareness and appreciation of marine transportation and its impact on the Los Angeles region.

#### Appendix D: Specialist Mr. Justin Farrell Research Portfolio

Outreach Project (Title)	Funding Support (\$)	Funding Source(s)	Collaborating Partners and Agencies	Duration (m/d/yr – m/d/yr)	User Group(s) (current or intended)
A. NOAA Portfields Project: Coastal Louisiana Pilot	NA <sup>1</sup>	NA	NOAA, FEMA, USACE, City of New Orleans Brownfields, Regional Planning Commission (RPC),	December 2005 through December 2007	Lower Mississippi River Port Complex, Port of New Orleans, Port of South Louisiana, Port of St. Bernard, Port of Plaquemines
B. LNG Traffic on the Calcasieu River	NA	NA	Louisiana Sea Grant (LSG) Extension personnel,	May 2005 to present.	Propeller Club of Southwest Louisiana, Calcasieu River Waterway Harbor Safety Committee (CRWHSC),
C. Vessel Salvage, Recovery, & Marine Debris Issues	NA	NA	Port of Valdez (AK), Louisiana Seafood Marketing & Promotion Board, Plaquemines Parish, LSG Extension personnel, Alaska Fishing Industry Relief Mission (AFIRM),	December 2005 through February 2006.	Plaquemines Parish, St. Bernard Parish, Port of St. Bernard, Commercial fishing industry
D. Environmental Impacts of LNG Development	NA	NA	NOAA	May 2005 to present.	Coastal Society, CRWHSC, Coastal Zone Managers

<sup>1</sup> NA = Projects included in the plan of work for Louisiana Coastal Ports Extension Project grant from Coastal Services Center (2005-2008)

E. Ports Association of Louisiana (PAL)- Technical Support	NA	NA	PAL, NOAA Osborn	July 2005 to present.	27 ports throughout Louisiana, Associate membership = 90+
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Research Project (Title)	Funding Support (\$)	Funding Source(s)	Collaborating Partners and Agencies	Duration (m/d/yr – m/d/yr)	User Group(s) (current or intended)
None at this time.	---	---	---	---	---

## **PROJECT DESCRIPTION**

### **A. NOAA Portfields Project: Coastal Louisiana Pilot**

Emerging partnership with NOAA and other federal agencies to bring a [Portfields Initiative Pilot Project](#) to the Lower Mississippi River Port Complex (Port of South Louisiana, Port of New Orleans, Port of St. Bernard and Plaquemines Parish Port, Harbor & Terminal District). Serving as liaison to ports for NOAA Kenneth Walker and the FEMA ESF-14 long-term recovery effort, including speaking at various Portfields meetings and at the Ports Critical Actions Team meeting, a part of the Governor's Long-term Recovery Authority (LRA) planning process. Kickoff for the pilot is scheduled for April 2006.

### **B & C. LNG Traffic on the Calcasieu River & Environmental Impacts of LNG Development**

Met with Port of Lake Charles staff and discussed LNG operations, along with LSG Extension Kevin Savoie. Conducted self-guided tour of Panhandle Energy's Trunkline LNG facility and met with VP Tommy Stone. Attend and speak at Propeller Club of Southwest Louisiana and Calcasieu River Waterway Harbor Safety Committee (CRWHSC) meetings and provided additional information on the liability of Harbor Safety Committees (6/17/05). Attended a special meeting of the CRWHSC Navigation Subcommittee and provided technical review and comment of controlled copies of the permitted Cameron LNG (Semptra) facility's Allision Study (MSI) and Passing Ship Study (MNI).

Submitted successful abstract to the Coastal Society for a panel on environmental solutions in offshore liquefied natural gas (LNG) development. Peer-reviewed publication will follow in 2006.

### **D. Salvage, Recovery, & Marine Debris Issues**

Initiated partnership opportunities on a derelict vessel removal program for Plaquemines, Terrebonne, and Lafourche Parishes. Conducted tour of Plaquemines Parish Port Authority's southern reaches, including the Venice Marina, Venice facilities, Pilottown, the Pilottown anchorage/West Bay sediment diversion, and the Associated Branch Pilot's facility at the Southwest Pass outlet. Conducted a tour of Terrebonne Port facilities with Terrebonne Parish governmental officials including Coastal Zone Managers James Miller, and Leslie Suazo, and Port Administrator Ed Watson. This is expected to blossom into a funded research project in 2006.

Through the combined efforts of the Louisiana, Washington, and Alaska Sea Grant programs, FEMA, the Pacific Coast Congress of Harbormasters (PCCH) and Valdez Port Director Alan Sorum, the Valdez City Council approved a donation of a surplus Marine Travelift donation to Plaquemines Parish, Louisiana. Plaquemines Parish was devastated by Hurricane Katrina, with an estimated 3,000 commercial vessels and 35,000 to 45,000 recreational vessels missing or damaged throughout Southeast Louisiana. A Marine Travelift is a mobile boat hoist, often used by marinas, shipyards, fishing ports and naval installations – a new, 60-ton unit would cost between \$250,000 and \$300,000. Plaquemines Parish officials plan to use the Travelift to recover boats damaged or

displaced by Hurricanes Katrina and Rita. Other agencies and organizations involved in the acquisition include the Louisiana Department of Wildlife and Fisheries and the Louisiana Seafood Promotion and Marketing Board, among others. Additionally, the Alaska Fishing Industry Relief Mission donated \$20,000 toward transportation of the Travelift; PCCH, \$1,200; and the Alaska Sea Grant program is donating a portion of its publication sales.

#### **E. Ports Association of Louisiana (PAL)- Technical Support**

Assist in drafting various post-Hurricane press releases and damage assessments for use by PAL and other state agencies (DOTD, DED)—distributed this information to the Associated Press, Reuters, and numerous local media outlets. Drafted and distributed whitepaper on the status of Louisiana ports following Hurricanes Katrina and Rita. Provide articles and research updates for PAL's monthly newsletter "News from the Docks," which is an excellent outreach tool, with an audience of all 27 ports in Louisiana and an associate membership of 90+ throughout the maritime industry.

#### **ADDITIONAL OUTREACH ACTIVITIES FOR 2005:**

- Involvement with the 2005 Ocean Commotion Educational Fair at Louisiana State University;
- Contributed to Louisiana Sea Grant's [Louisiana Hurricane Recovery Resources](#) website and post-Hurricane efforts;
- Served as resource to Louisiana Sea Grant network;
- Have provided information to WorkBoat Magazine, Louisiana Seafood Promotion & Marketing Board, and other news sources, Louisiana Department of Economic Development (LDED), NOAA Portfields, Lower Mississippi River Waterways Safety Advisory Commission (LMRWSAC), and the Propeller Club of Southwest Louisiana;
- Organizing/moderating a panel on Environmental Impacts of LNG at the [Coastal Society's 20<sup>th</sup> International Conference](#) in May 2006 (paper to follow).

#### **PUBLICATIONS FOR 2005:**

Farrell, J.E. and R. Kron. 2005. Travelift to be Used in Boat Salvage. *News From the Docks* 6(12): 9-10. Publication of the Ports Association of Louisiana, retrieved on January 4, 2006, from <http://www.portsoflouisiana.org/December2005.pdf>.

Farrell, J.E. 2005. Louisiana Sea Grant Launches Hurricane Recovery Website. *News From the Docks* 6(11): 11. Publication of the Ports Association of Louisiana, retrieved on January 4, 2006, from <http://www.portsoflouisiana.org/Nov2005.pdf>.

Farrell, J.E. 2005. Tradeoffs in Coastal Restoration: The Pilottown Anchorage. *News From the Docks* 6(9-10): 7-8. Publication of the Ports Association of Louisiana, retrieved on January 4, 2006, from <http://www.portsoflouisiana.org/SeptOct2005.pdf>.

Farrell, J.E. 2005. Ports Featured at Coastal Zone 2005. *News From the Docks* 6(8): 7-8. Publication of the Ports Association of Louisiana, retrieved on January 4, 2006, from <http://www.portsoflouisiana.org/August2005.pdf>.

Farrell, J.E. 2005. The LNG debate heats up: ORV vs. SCV. *News From the Docks* 6(7): 7-9. Publication of the Port Association of Louisiana (PAL), retrieved from <http://www.portsoflouisiana.org/Nov2005.pdf>.

# Appendix E: Specialist Mr. David Knight Research Portfolio

Research Project (Title)	Funding Support (\$)	Funding Source(s)	Collaborating Partners and Agencies	Duration (m/d/yr – m/d/yr)	User Group(s) (current or intended)
A. NOAA Great Lakes Regional Needs Assessment – Ports/Navigation Component	\$655,000 for entire project, including coastal zone mgmt. and data monitoring components	NOAA: (\$355K) Great Lakes Commission: (\$350K)	NOAA National Ocean Service, Coastal Services Center	Needs Assessment: 12/15/05 -6/1/06  Total project timeline: 9/23/04 – 8/1/09	Great Lakes marine transportation interests, including deep draft and shallow draft ports and harbors.
B. Update on 1993 study: Great Lakes and St. Lawrence River Commerce: Safety, Energy and Environmental Implications of Modal Shifts	\$36,000	\$6K each from: St. Lawrence Seaway Management Corp.; St. Lawrence Seaway Development Corp.; Canadian Shipowners Assoc.; Lake Carriers' Assoc.; American Great Lakes Ports; and Chamber of Maritime Commerce	Tennessee Valley Authority, Limno-Tech Inc., funding source organizations	10/1/03 – 2/1/06	Commercial marine interests in the Great Lakes/St. Lawrence Seaway system, including ports, vessel operators, commodity interests, cargo handlers
C. Economic Benefits of Recreational Boating in the Great Lakes	\$203,400	U.S. Army Corps of Engineers (Authorized in WRDA 1999)	Foundation for Recreational Boating Safety, Education and Environmental Awareness;	11/1/03 – 3/31/06	Recreational boating interests in the Great Lakes including marina operators, boating

			Recreational Marine Research Center at Michigan State University		manufacturers and dealers, shallow draft harbor communities
D. Great Lakes Observing System	\$248,000 for FY06	NOAA National Ocean Service	NOAA, US EPA, US Fish & Wildlife Service, US Geological Survey, US Army Corps of Engineers, US Coast Guard, States, Universities, and Industry	12/1/03 - ongoing	Great Lakes navigation interests, including commercial shipping, recreational boaters, commercial fishing interests, port and harbor managers, Coast Guard



Research Project (Title)	Funding Support (\$)	Funding Source(s)	Collaborating Partners and Agencies	Duration (m/d/yr – m/d/yr)	User Group(s) (current or intended)
The two following projects are in development:					
E. Port-based program for early detection and monitoring of aquatic nuisance species in the Great Lakes.	To be determined	American Great Lakes Ports Association	Northeast Midwest Institute, NOAA, US EPA	To be determined	Commercial Great Lakes port interests, including port authorities, private vessel and dock operators, environmental and resource management groups
F. Valuation of Great Lakes/St. Lawrence Seaway System	To be determined	US Army Corps of Engineers	To be determined	To be determined	Great Lakes port and harbor communities, marine transportation and recreation interests

## PROJECT DESCRIPTION

A. This project originated from a Joint Project Agreement between the Great Lakes Commission and the NOAA Coastal Services Center (CSC) designed to explore a greater regional presence for the CSC in the Great Lakes. Specifically, the Needs Assessment will focus on three areas: coastal community development, ports/navigation and information management. Within each of these issue areas, data will be collected among relevant public and private sector groups to identify specific needs and/or gaps, with the ultimate goal of developing products and services, and efficient delivery systems, to meet the needs.

B. The impetus for the Modal Shift Study comes from commercial transportation interests in the Great Lakes eager to research and document quantifiable advantages to the marine transportation mode, specifically as compared to rail and highway transportation. The original study conducted by the Great Lakes Commission in 1993 has been widely circulated; the update now underway uses similar cargo movement scenarios to compare the three modes on the basis of safety, fuel efficiency and toxic air emissions. The outcome will hopefully demonstrate continuing advantages of marine transportation, and encourage greater consideration of the marine mode in transportation planning and policy making.

C. The Recreational Boating Economic Benefits Study was largely designed to demonstrate a federal interest in maintaining authorized recreational harbors by documenting their full economic impact. The core of the project was the most comprehensive calculation of boater spending (both trip spending and craft spending) ever done in the U.S., using a nationwide on-line “boater panel” of some 10,000 participants. The study also calculated economic impacts in the Great Lakes of charter fishing, marina operations and the manufacturing and sales of recreational boats in the region.

D. The Great Lakes Observing System (GLOS) is the regional node of the Integrated Ocean Observing System (IOOS). GLOS is committed to providing integrated, remotely-sensed and in situ information about the Great Lakes, their interconnecting waterways, the St. Lawrence River, and the hydrology, sediment nutrient, and pollutant contributions from their tributaries and airsheds for use by researchers, managers, industry, educators and others engaged in commerce, education and science on or about the system. GLOS has to date been housed at and facilitated by the Great Lakes Commission; my role has been as a liaison with the navigation user group to identify its specific needs, and to identify and engage appropriate representatives within that group to participate in the formation of the GLOS Regional Association. Currently, GLOS is one of the more advanced RAs in the country, with a draft business plan and articles of incorporation awaiting adoption.

E. Port authorities in the Great Lakes have indicated a desire to engage in a meaningful way the issue of aquatic nuisance species in the Great Lakes, particularly those suspected to have been introduced and/or spread by commercial vessel ballasting operations. I am currently working with the American Great Lakes Ports Association and the other partners identified above to develop a port-based

ANS detection and monitoring system, using the port of Detroit as a prototype, and some early detection/monitoring research already assembled by the Great Lakes Commission as a potential model.

F. New metrics have been developed by the Corps of Engineers to assess dredging needs among deep draft commercial ports, and to develop operation and maintenance budgets accordingly. These metrics are largely driven by performance based budgeting concepts dictated by the Office of Management and Budget. To better qualify (i.e. "compete") for adequate O&M allocations in its Great Lakes districts, the Corps is in early stages of working with the Great Lakes Commission to develop, for the first time, an accurate valuation of the Great Lakes/St. Lawrence Seaway system and its navigation infrastructure.

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Appendix F: Specialist Mr. David Chapman Research Portfolio

A. Delaware Clean Marina Program	10,000 10,000 14,445 13,000 20,000 20,000 10,500	DNREC CIB DNREC CIB DNREC NFWF CIB	EPA EPA NOAA EPA NOAA NOAA EPA	10/1/01-9/30/02 10/1/01-9/30/02 1/30/03-3/31/04 10/1/03-9/30/04 2/17/04-9/30/04 10/1/04-9/30/05 10/1/04-9/30/05	Marina owners and operators; recreational boaters
B. Boating Infrastructure Grant (Big) Program	30,027 21,000	DNREC DNREC	EPA/CVA EPA	3/14/02-9/30/02 2/25/03-9/30/03	Transient boaters
C. Passenger Vessel Accessibility Guidelines (ADA)	9,700	US Access Board	DOT	9/23/02-3/22/03	Public users of water transportation
D. Professional Education-Marine Engineering	7,494	NDI Engineering, Inc.	Kvaerner Philadelphia Shipyard, Inc.	10/4/02-12/31/02	Kvaerner Philadelphia Shipyard production supervisors
E. Oceanographic Research Vessel Accessibility for Persons with Disabilities	94,197	NSF	UNOLS	10/1/05-9/30/07	Disabled science students who want to use oceanographic research vessels (ORVs); ORV operators
F. National Ferry Database	6.824	Prime	J. Corbett, PI - UD MARAD	10/8/02-2/5/03	Ferry owners/operators and researchers

G. Ferry Emission Reduction	121,158	Rutgers University	J. Corbett, PI – UD FTA	8/28/03-8/30/04	Federal, state, and local policy makers for air quality
H. Right Whale strike avoidance	253,510	NOAA	J. Firestone, PI – UD NOAA	9/1/04-8/31/07	Federal and state policy makers for coastal and deepwater shipping
I. Operations Development Scoping and Evaluation for Gloucester – Shelbourne International Ferry	15,000 (est)	TechICON	City of Gloucester, MA	Sep 2001-Mar 2002 (est)	City of Gloucester, MA
J. Vessel Operator Engine Emissions Measurement Guide	50,000 (est)	Marine Chemist & Environmental Consultants	J. Corbett, PI - UD MARAD	Oct 2001-Sep 2002 (est)	US Maritime industry; Federal, state, and local policy makers for air quality

## **PROJECT DESCRIPTION**

- A. Develop and manage a program to encourage environmental stewardship by boaters and marina operators and owners
- B. Provide administrative and outreach services to enhance marina facilities for transient boaters
- C. Assist the U.S. Access Board in developing Federal regulations for passenger accessibility to commercial and public vessels
- D. Provide training in marine engineering and naval architecture to shipyard professionals
- E. Enhance accessibility of ORVs to disabled scientists; educate ORV operators in accessibility responsibilities and opportunities; develop and document best management practices for accommodating disabled scientists on ORVs
- F. Assist in developing national database of ferry operations
- G. Evaluate commercial vessel traffic characteristics and whale strike probabilities along the North Atlantic coastline
- H. Evaluation of public-private incentives to reduce emissions from regional ferries
- I. Feasibility study for Gloucester, MA to Shelburne, Nova Scotia high-speed vehicle ferry
- J. Development of Vessel Operator Engine Emissions Measurement Guide